

**AMENDED CLAIM SET:**

1. - 9. (cancelled).
10. (previously presented) A method of producing a bioactive composite material, comprising apatite, for dental or orthopedic use, which material comprises groups with a tendency for decomposition, where a densification of the material is performed at high temperatures under pressure, characterized in that the densification is performed in a closed system where applying of a pressure partially or completely takes place before an end temperature for the densification is reached, and before commencing substantial decomposition of apatite phase, characterized in that one or more helping agents are added to a barrier layer at densification by hot isostatic pressing or to a powder bed at densification by over pressure sintering, in order to further suppress unwanted reactions.
11. (previously presented) The method of claim 10, characterized in that said helping agent is a fine-grained metal powder and/or a hydrate.
12. - 22. (cancelled).